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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/071,482

02/07/2002

Walter A. Jessup

03012/37091A

1810

4743

7590

04/06/2004

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EXAMINER

MEDINA SANABRIA, MARIBEL

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/071,482	JESSUP ET AL.	
	Examiner	Art Unit	
	Maribel Medina	1754	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/7/02.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/22/02; 2/13/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**Information Disclosure Statement**

1. The references US 5,098,680 and US 5,296,206 listed in the information disclosure statement filed 2/13/2003 have not been initialized since they were initialized in the IDS filed on 4/22/2002.

**Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63 294929 A (Tomita) in view of US Patent No. 3,468,134 (Garst).

Tomita discloses a process for producing an ammonia-containing gaseous product from aqueous ammonia comprising the steps of transporting concentrated aqueous ammonia from a source location (6) to a location (10) remote from said source location (6); and vaporizing a portion of ammonia from said concentrated aqueous ammonia to produce an ammonia-containing gaseous product and a dilute aqueous ammonia remainder.

Tomita fails to disclose returning part of the dilute aqueous ammonia remainder to a source location (instant claim 1) and fails to disclose combining a portion of the remainder with ammonia to form concentrated aqueous ammonia (instant claim 4).

Garst is relied upon to teach concentrating ammonia with ammonia-containing water. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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have recycled the dilute aqueous ammonia remainder of Tomita, back to a concentrated aqueous ammonia location source to further concentrate ammonia in the location source, in order to utilize any ammonia remaining in the remainder (15) of Tomita and achieve a better yield on ammonia-containing gaseous product. Alternatively it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the remainder (15) of Tomita to concentrate ammonia, since Garst teaches that a ammonia-containing water (dilute ammonia containing water) can be used to concentrate ammonia (See col. 6, lines 66-75 and col. 7, lines 1-5).

Regarding claim 6, Tomita discloses that the concentrated water contains 25 wt. % ammonia.

Regarding claim 7, Tomita fails to disclose using an ammonia concentration of 19 wt. % or less, however, it is well known in the art that the concentration of ammonia in an aqueous solution to be evaporated is a result effective variable. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined, by experimentation, the suitable ammonia concentration, such as of 19 wt.% or less, in Tomita's process, to produce ammonia-containing gaseous product in a desired concentration, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 8-11, Tomita discloses that the dilute aqueous ammonia remainder contains 0.1 % ammonia.

Regarding claims 12 and 13, Tomita discloses the use of a stripper (10).

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4. Claims 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita in view of Garst as applied to claims 1-13 and 23 above, and further in view of US Patent No. 5,098,680 (Fellows et al).

Tomita in view of Garst apply herein as above.

Tomita in view of Garst fail to disclose the various modes of control of claims 14-18 and 21-22 and fails to disclose the use of a single stage vaporizer (claim 20) and the use of a distillation column (19) to vaporize the ammonia.

Fellows et al is relied upon to teach a method for vaporizing concentrated aqueous ammonia. Fellows et al teaches that it is well known in the art to use vaporization conventional means to vaporize ammonia in concentrated aqueous ammonia. Fellows et al exemplifies his invention with the use of a stripper and vaporization drum (See col. 5, lines 18-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used any conventional means, such as a vaporization drum (instantly claimed single stage vaporizer) or a distillation column, in Tomita in view of Garst process, since Fellows et al teaches that these are known conventional means to vaporize ammonia in concentrated aqueous ammonia.

Regarding the modes of control, Fellows et al disclose or suggest the instantly claimed modes (see col. 6, lines 1 to col. 7, line 22). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the modes of control taught by Fellows et al in Tomita in view of Garst process in order to achieve the desired concentration of ammonia in both the ammonia gas and the remainder or dilute ammonia aqueous solution.

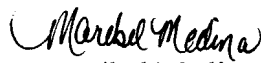
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**Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maribel Medina whose telephone number is (571) 272-1355. The examiner can normally be reached on Monday through Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Maribel Medina  
Examiner  
Art Unit 1754